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WARE FRESSOLA VAN DER SLUYS &
ADOLPHSON, LLP
BRADFORD GREEN BUILDING 5
755 MAIN STREET, P O BOX 224
MONROE, CT 06468

EXAMINER

ZEWARI, SAYED T

ART UNIT PAPER NUMBER

2687

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/757,983	Applicant(s) RONKKO, ANTTI	
	Examiner Sayed T. Zewari	Art Unit 2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-48 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-5, 7, 8, 10-22, 24, 25, 27-30, 33, 34, 36-45, 47 and 48 is/are rejected.
- 7) ☐ Claim(s) 6, 9, 23, 26, 31, 32, 35 and 46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Objections

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "A Dual Purpose Foldable/ sliding Keyboard For Mobile Communication Devices Such As Telephone And Personal Digital Assistant Intended For Easy Entry Of Both Telephone Numbers And Text Input Data".

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7, 8, 10-13, 18, 19-21, 36, 37, 42, and 43 rejected under 35 U.S.C. 102(e) as being anticipated by Wendorff et al. (US 2003/0,157,957 A1).

With respect to claim 1, Wendorff discloses an electronic device for operation in multiple applications (See abstract, section [0004]).

Wendorff discloses a main body element having upper and lower faces relative to usage (See figure 1 and 5).

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Wendorff discloses a screen constructed in at least a first portion of the upper face of said main body element to provide a visible display of information to the user (See figure 1(160), section [0019]).

Wendorff discloses a first panel mounted on the main body element for pivotal motion thereon between open and closed positions, said first panel having first and second faces, said first face accessible to the user in said closed position and said second face accessible to the user in said open position (See Wendorff figure 3, 4, 5, 6, 7, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position (See figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said first and second panels are in overlapping alignment with one another in the closed position (See figure 1, 2, 3, 4, and 5, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a function keyboard constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said function keyboard is exposed for operative use in said open position wherein said first and second panels are in non-overlapping alignment with one another in said open position and said first and second panels are located on opposite sides of said screen in said open position wherein an additional portion of the upper face of said main body element located beneath and substantially covered by said second panel in said closed position is revealed and accessible to the user in said open position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

With respect to claim 2, Wendorff discloses that in the electronic device, as defined in claim 1, the first panel is manually rotatable about its pivotal axis (See figure 1-5, section [0029]).

With respect to claim 3, Wendorff discloses that in the electronic device for operation in multiple applications, as defined in claim 1, the second panel is manually moved sideways (See figure 1-5, section [0022], and [0028]).

With respect to claim 4, Wendorff discloses that the first panel is bias assisted between its respective said closed and open position (See section [0022]).

With respect to claim 5, Wendorff discloses that the second panel is basis assisted between its respected said closed and open position (See section [0023]).

With respect to claim 7, Wendorff discloses that the second panel is inhibited for sideways movement and said first panel rotates about its pivotal axis between said open and closed positions (See figure 1-5, section [0022], [0023], [0028], and [0029]).

With respect to claim 8, Wendorff discloses that additional portion of the upper face of said main body element carries an additional array of keys consistent with a selected function (See figure 1, section [0019]).

With respect to claim 10, Wendorff discloses that the function keyboard comprises a full function QWERTY key array split in first and second portions constructed respectively in said first and second panels (See figure 4, section [0023] where “alphanumeric keyboard”, and similarity to “computer keyboard” or “typewriter” implies a QWERTY type of layout).

With respect to claim 18, Wendorff discloses all the limitation of claims 1 and 10. Wendorff further discloses that the communication device keypad is locked in said open position (See section [0023]).

With respect to claim 11, Wendorff discloses that the function keyboard comprises a game controller with multiple function keys divided between said first and second panels (See section [0040], and [0041]).

With respect to claim 12, Wendorff discloses that the said array of keys on said faces of said panels are offset to prevent interference between the keys of said faces in said closed position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

With respect to claim 13, Wendorff discloses a mobile communication device comprising of keypad constructed on said first face of said first panel, said keypad being exposed for operative use in said closed position (See Wendorff figure 1- 5, and section [0020], [0022], [0023], [0028], and [0029]).

With respect to claim 19, Kim discloses a function keyboard for use in a mobile communications device, said communications device having a main body element, a communications keypad, and a screen for displaying information to the user (See Kim abstract, figure 1(12 & 13), figure 2(12, 13, & 16), section [0021], [0022], [0029], [0030], and [0031]).

Wendorff discloses a first panel mounted on the main body element having upper and lower surfaces for pivotal motion thereon between open and closed positions, said first panel having first and second faces wherein said communications keypad is constructed on said first panel, said communications keypad being exposed for operative use in said closed position (See Wendorff figure 3, 4, 5, and section [0020] and [0023]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position;

wherein said function keyboard is constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function;

wherein said function keyboard is exposed for operative use in said open position and said first and second panels are in overlapping alignment with one another in the closed position, and

wherein said first and second panels are in non-overlapping alignment with one another in said open position and said first and second panels are located on opposite sides of said screen in said open position wherein an additional portion of the upper face of said main body element located beneath and substantially covered by said second panel in said closed position is revealed and accessible to the user in said open position (See Wendorff figure 3, 4, 5, and section [0020], [0022],[0023],[0028],and [0029]).

With respect to claim 20, Wendorff discloses a mobile communication device for operation in multiple applications (See abstract, section [0002]).

Wendorff discloses a main body element having upper and lower faces related to usage (See figure 1 and 5).

Wendorff discloses a screen constructed in at least a first portion of the upper face of said main body element to provide a visible display of information to the user (See figure 1(160), section [0019]).

Wendorff discloses a first panel mounted on the main body element for pivotal motion thereon between open and closed positions, said first panel having first and second faces, said first face accessible to the user in said closed position and said second face accessible to the user in said open position (See Wendorff figure 3, 4, 5, and section [0020], [0022],[0023],[0028],and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position (See Wendorff figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said first and second panels are in overlapping alignment with one another in the closed position (See figure 1, 2, 3, 4, and 5, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a communication keypad constructed on said first face of said first panel, said keypad being exposed for operative use in said closed position (See figure 1, 2, 5, 6, and 7,section [0020], [0021], [0022], [0023], [0034]).

Wendorff discloses a function keyboard constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said function keyboard is exposed for operative use in said open position wherein said first and second panels are in non-overlapping alignment with one another in said open position and said first and second panels are located on opposite sides of said screen in said open position wherein an additional portion of the upper face of said main body element located beneath and substantially covered by said second panel in said closed position is revealed and accessible to the user in said open position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

With respect to claim 21, Wendorff discloses a function keyboard for use in an electronic device, said device having a main body element, and a screen for displaying information to the user, and keyboard (See figure 1((100, 160, 110), section [0020]).

Wendorff discloses a first panel mounted on the main body element having upper and lower surfaces for pivotal motion thereon between open and closed positions, said first panel having first and second faces (See Wendorff figure 3, 4, 5, and section [0020], [0022],[0023],[0028],and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position (See Wendorff figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a function keyboard constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function, wherein said function keyboard is exposed for operative use in said open position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said first and second panels are in overlapping alignment with one another in the closed position, and wherein said first and second panels are in non- overlapping alignment with one another in said open position and said first and second panels are located on opposite sides of said screen in said open position wherein an additional portion of the upper face of said main body element located beneath and substantially covered by said second panel in said closed position is revealed and accessible to the user in said open position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

With respect to claim 36, Wendorff discloses an electronic device for operation in multiple applications (See abstract, section [0004]).

Wendorff discloses a main body element having upper and lower faces relative to usage (See figure 1 and 5).

Wendorff discloses a screen constructed in at least a first portion of the upper face of said main body element to provide a visible display of information to the user (See figure 1(160), section [0019]).

Wendorff discloses a first panel mounted on the main body element for pivotal motion thereon between open and closed positions, said first panel having first and second faces, said first face accessible to the user in said closed position and said second face accessible to the user in said open position (See Wendorff figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position (See Wendorff figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said first and second panels are in overlapping alignment with one another in the closed position (See figure 1, 2, 3, 4, and 5, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a function keyboard constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard

portions having an array of keys consistent with a selected function (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said function keyboard is exposed for operative use in said open position wherein said function keyboard comprises a game controller with multiple function keys divided between said first and second panels (See figure 1-7, section [0020], [0022], [0023], [0028], [0029], [0040], [0041], claim 27 and 34).

With respect to claim 37, Wendorff discloses an electronic device for operation in multiple applications (See abstract, section [0004]).

Wendorff discloses a main body element having upper and lower faces relative to usage (See figure 1 and 5).

Wendorff discloses a screen constructed in at least a first portion of the upper face of said main body element to provide a visible display of information to the user (See figure 1(160), section [0019]).

Wendorff discloses a first panel mounted on the main body element for pivotal motion thereon between open and closed positions, said first panel having first and second faces, said first face accessible to the user in said closed position and said second face accessible to the user in said open position (See Wendorff figure 3, 4, 5, 6, 7, and section [0020], [0022], [0023],[0028],and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in

said open position and inaccessible to the user in said closed position (See Wendorff figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said first and second panels are in overlapping alignment with one another in the closed position (See figure 1, 2, 3, 4, and 5, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a function keyboard constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said function keyboard is exposed for operative use in said open position wherein said any of keys on said faces of said panels are offset to prevent interference between the keys of said faces in said closed position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

With respect to claim 42, Wendorff discloses a function keyboard for use in an electronic device, said device having a main body element, and a screen for displaying information to the user (See figure 1((100, 160, 110), section [0020]).

Wendorff discloses a first panel mounted on the main body element having upper and lower surfaces for pivotal motion thereon between open and closed positions, said first panel having first and second faces (See Wendorff figure 3, 4, 5, 6, 7, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position (See Wendorff figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff wherein said function keyboard is constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function, wherein said function keyboard is exposed for operative use in said open position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said portions of said function keyboard comprises a game controller with multiple function keys divided between said first and second panels (See figure 1-7, section [0020], [0022], [0023], [0028], [0029], [0040], [0041], claim 27 and 34).

With respect to claim 43, Wendorff discloses a function keyboard for use in an electronic device, said device having a main body element, and a screen for displaying information to the user (See figure 1((100, 160, 110), section [0020]).

Wendorff discloses a first panel mounted on the main body element having upper and lower surfaces for pivotal motion thereon between open and closed positions, said

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first panel having first and second faces (See Wendorff figure 3, 4, 5, 6, 7, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position (See figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a function keyboard constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function, wherein said function keyboard is exposed for operative use in said open position, and wherein said array of keys on said faces of said panels are offset to prevent interference between the keys of said faces in said closed position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14-17, 22, 24, 25, 27, 33, 34, 38-41, 44, 45, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wendorff (US 2003/0,157,957 A1) in view of P. Capps (US 2003/0,073,414 A1).

With respect to claim 14, Wendorff discloses all the limitations of claim 1 and 10. However, Wendorff does not specifically disclose a control unit operating to rotate the orientation of the display on screen consistent with the functional position of the first and second panel. But P. Capps disclose a control unit operating to rotate the orientation of the display on said screen consistent with the functional position of said first and second panels so that said display is aligned with said communication keypad in said closed position and aligned with said functional keyboard in said open position (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0025]; [0026], and [0035], where the role of a control unit in rotating the orientation of the display is inherent). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as required, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 15, Wendorff discloses all the limitations of claim 1 and 11. However, Wendorff does not specifically disclose that the display on said screen is rotated 90° between open and closed positions. But P. Capps disclose a control unit

operating to rotate the orientation of the display on said screen (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0025], [0026], and [0035], where the role of a control unit in rotating the orientation of the display is inherent and the control unit rotates the display on screen at 90° between telephony and textual data input). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as required, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 16, Wendorff discloses all the limitations of claims 1, 12. However, Wendorff does not specifically disclose that the orientation of display is controlled by the position of said first panel. But P. Capps discloses that the orientation of the display is controlled by the position of the second panel (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0045], [0046], and [0047], where the orientation of the display on the screen is controlled by sliding the panel 110. A similar technique could be applied so that the orientation of the display on the screen is controlled by sliding the first panel as well). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as a panel is closed or opened, thereby allowing a familiar,

natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 38, Wendorff discloses an electronic device for operation in multiple applications (See abstract, section [0004]).

Wendorff discloses a main body element having upper and lower faces relative to usage (See figure 1 and 5).

Wendorff discloses a screen constructed in at least a first portion of the upper face of said main body element to provide a visible display of information to the user (See figure 1(160), section [0019]).

Wendorff discloses a first panel mounted on the main body element for pivotal motion thereon between open and closed positions, said first panel having first and second faces, said first face accessible to the user in said closed position and said second face accessible to the user in said open position (See Wendorff figure 3, 4, 5, 6, 7, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position (See figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said first and second panels are in overlapping alignment with one another in the closed position (See figure 1, 2, 3, 4, and 5, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a function keyboard constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function, wherein said function keyboard is exposed for operative use in said open position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a communication keypad constructed on said first face of said first panel, said keypad being exposed for operative use in said closed position (See figure 1, 2, 5, 6, and 7, section [0020], [0021], [0022], [0023], [0034]).

However, Wendorff does not specifically disclose a control unit operating to rotate the orientation of the display on screen consistent with the functional position of the first and second panel. But P. Capps disclose a control unit operating to rotate the orientation of the display on said screen consistent with the functional position of said first and second panels so that said display is aligned with said communication keypad in said closed position and aligned with said functional keyboard in said open position (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0025], [0026], and [0035], where the role of a control unit in rotating the orientation of the display is inherent). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as

disclosed by P. Capps) by which the control unit rotate the orientation of display as required, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 44, Wendorff discloses a function keyboard for use in an electronic device, said device having a main body element, and a screen for displaying information to the user (See figure 1((100, 160, 110), section [0020]).

Wendorff discloses a first panel mounted on the main body element having upper and lower surfaces for pivotal motion thereon between open and closed positions, said first panel having first and second faces (See Wendorff figure 3, 4, 5, 6, 7, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a second panel mounted on the main body element for sideways rectilinear motion thereon and relative thereto between open and closed positions, said second panel having a third face, said third face accessible to the user in said open position and inaccessible to the user in said closed position (See Wendorff figure 3, 4, 5, and section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses a function keyboard constructed in two portions, a first portion constructed in the second face of said first panel and a second portion constructed in said third face of said second panel, each of said function keyboard portions having an array of keys consistent with a selected function, wherein said function keyboard is exposed for operative use in said open position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

Wendorff discloses that the said device is a mobile communication device and further comprises a communication keypad constructed on said first face of said first panel, said keypad being exposed for operative use in said closed position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

However, Wendorff does not specifically disclose a control unit operating to rotate the orientation of the display on screen consistent with the functional position of the first and second panel. But P. Capps disclose a control unit operating to rotate the orientation of the display on said screen consistent with the functional position of said first and second panels so that said display is aligned with said communication keypad in said closed position and aligned with said functional keyboard in said open position (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0025], [0026], and [0035], where the role of a control unit in rotating the orientation of the display is inherent). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as required, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 17, Wendorff discloses all the limitations of claims 1 and 12. However, Wendorff does not specifically disclose that the orientation of display is controlled by the position of said second panel. But P. Capps discloses that the orientation of the display is controlled by the position of the second panel (see P. Capps

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abstract, figure 1a, 2a, 3, 4, 5, section [0045], [0046], and [0047], where the orientation of the display on the screen is controlled by sliding the panel 110). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as a panel is closed or opened, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 22, Wendorff and P. Capps disclose all the limitations of claims 1, 12, and 17. Wendorff further discloses that the rotational movement of said first panel about its pivotal axis causes sideways linear movement of said second panel (See Wendorff figure 1- 5, 8, and 9, section [0028], and [0029]).

With respect to claim 24, Wendorff and P. Capps disclose all the limitations of claims 1, 12, and 17. Wendorff discloses that the second panel is inhibited for sideways movement whereby said first panel rotates about its pivotal axis between said open and closed positions (See figure 1-5, section [0022], [0023], [0028], and [0029]).

With respect to claim 25, Wendorff discloses all the limitations of claim 1, 12, and 17. Wendorff further discloses that additional portion of the upper face of said main body element carries an additional array of keys consistent with a selected function (See figure 1, section [0019]).

With respect to claim 27, Wendorff discloses all the limitations of claims 1, 12, and 17. Wendorff further discloses that the function keyboard comprises a full function QWERTY key array split in first and second portions constructed respectively in said first and second panels (See figure 4, section [0023] where “alphanumeric keyboard”, and similarity to “computer keyboard” or “typewriter” implies a QWERTY type of layout).

With respect to claim 33, Wendorff discloses all the limitations of claims 1, 12, 17, and 27. However, Wendorff does not specifically disclose that the orientation of display is controlled by the position of said first panel. But P. Capps discloses that the orientation of the display is controlled by the position of the second panel (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0045], [0046], and [0047], where the orientation of the display on the screen is controlled by sliding the panel 110. A similar technique could be applied so that the orientation of the display on the screen is controlled by sliding the first panel as well). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as a panel is closed or opened, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 34, Wendorff discloses all the limitations of claims 1, 12, 17, and 27. However, Wendorff does not specifically disclose that the orientation of display is controlled by the position of said second panel. But P. Capps discloses that the orientation of the display is controlled by the position of the second panel (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0045], [0046], and [0047], where the orientation of the display on the screen is controlled by sliding the panel 110). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as a panel is closed or opened, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 39, Wendorff and P. Capps disclose all the limitations of claims 1, 12, 17, 27, and 34. However, Wendorff does not specifically disclose that the display on said screen is rotated 90° between open and closed positions. But P. Capps disclose a control unit operating to rotate the orientation of the display on said screen (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0025], [0026], and [0035], where the role of a control unit in rotating the orientation of the display is inherent and the control unit rotates the display on screen at 90° between telephony and textual data input). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotates the

orientation of display as required, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 40, Wendorff discloses all the limitations of claims 1, 12, 17, 27, and 34. However, Wendorff does not specifically disclose that the orientation of display is controlled by the position of said first panel. But P. Capps discloses that the orientation of the display is controlled by the position of the second panel (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0045], [0046], and [0047], where the orientation of the display on the screen is controlled by sliding the panel 110. A similar technique could be applied so that the orientation of the display on the screen is controlled by sliding the first panel as well). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as a panel is closed or opened, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 45, Wendorff and P. Capps disclose all the limitations of claims 1, 12, 17, 27, 34, and 40. Wendorff further discloses that the rotational movement of said first panel about its pivotal axis causes sideways linear movement of said second panel (See Wendorff figure 1- 5, 8, and 9, section [0028], and [0029]).

With respect to claim 47, Wendorff and P. Capps disclose all the limitations of claims 1, 12, 17, 27, 34, and 40. However, Wendorff does not specifically disclose that the orientation of display is controlled by the position of said first panel. But P. Capps discloses that the orientation of the display is controlled by the position of the second panel (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0045], [0046], and [0047], where the orientation of the display on the screen is controlled by sliding the panel 110. A similar technique could be applied so that the orientation of the display on the screen is controlled by sliding the first panel as well). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as a panel is closed or opened, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 48, Wendorff and P. Capps disclose all the limitations of claims 1, 12, 17, 27, 34, and 40. However, Wendorff does not specifically disclose that the orientation of display is controlled by the position of said second panel. But P. Capps discloses that the orientation of the display is controlled by the position of the second panel (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0045], [0046], and [0047], where the orientation of the display on the screen is controlled by sliding the panel 110). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a

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software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as a panel is closed or opened, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 41, Wendorff discloses all the limitations of claims 1, 12, 17, 27, and 34. However, Wendorff does not specifically disclose that the orientation of display is controlled by the position of said second panel. But P. Capps discloses that the orientation of the display is controlled by the position of the second panel (see P. Capps abstract, figure 1a, 2a, 3, 4, 5, section [0045], [0046], and [0047], where the orientation of the display on the screen is controlled by sliding the panel 110). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendorff and include a software functionality (as disclosed by P. Capps) by which the control unit rotate the orientation of display as a panel is closed or opened, thereby allowing a familiar, natural, and efficient way to enter both the telephone input and textual input (See P. Capps section [0024]).

With respect to claim 28, Wendorff discloses all the limitations of claims 1, 12, and 17. Wendorff further discloses that the keyboard comprises a game controller with multiple function keys divided between said first and second panels (See section [0040], and [0041]).

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With respect to claim 29, Wendorff discloses all the limitations of claims 1, 12, and 17. Wendorff further discloses that the array of keys on said faces of said panels are offset to prevent interference between the keys of said faces in said closed position (See figure 1-7, section [0020], [0022], [0023], [0028], and [0029]).

With respect to claim 30, Wendorff discloses all the limitations of claims 1, 12, and 17. Wendorff further discloses a mobile communication device comprising of keypad constructed on said first face of said first panel, said keypad being exposed for operative use in said closed position (See Wendorff figure 1- 5, and section [0020], [0022], [0023], [0028], and [0029]).

Allowable Subject Matter

Claims 6, 9, 23, 26, 31, 32, 35, and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Park et al. (US 2004/0,106,429) discloses a portable communication apparatus having data input expandability.

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Kim (US 2005/0,020,323) discloses a portable digital communication device having the capability of both keypad for telephone and keyboard for data entry.

Park et al. (US 2004/0,203,517) discloses a mobile terminal and hinge device that allows text data entry through keyboard.

Kuroda (US 2004/0,048,632) discloses a mobile communication equipment with keyboard.

Sternglass et al. (US 5,995,025) discloses a foldable keyboard with sliding segments for electronic products.

Moon (US 2004/0,204,197) discloses a portable information terminal having expandable data input unit.

Tosey et al. (US 2004/0,229,663) discloses a mobile electronic device with tactile keyboard.

Finke-Anlauff (US 2002/0,006,815) discloses a foldable keyboard for mobile communications device.

Meagher (US 5,733,056) discloses a foldable keyboard for mobile communications device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sayed T. Zewari whose telephone number is 571-272-6851. The examiner can normally be reached on 8:30-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sayed T. Zewari

11/25/05


1218/05
LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER